Amendments to the Claims

1. (Currently Amended) A method of scheduling data for transmission from a base station over a shared channel to a plurality of subscriber stations, said method comprising:

determining a fairness factor from a range of possible fairness factors, where a first end of said range indicates a policy of scheduling data with maximum fairness between said plurality of subscriber stations and a second end of said range indicates a policy of scheduling data for maximum data traffic over said shared channel; and

for each subscriber station in said plurality of subscriber stations that said base station has data to be delivered to

determining a quality of service priority value, said quality of service priority value indicating a priority of said subscriber station relative to other subscriber stations in said plurality of subscriber stations;

determining a throughput value, said throughput value indicating the quantity of data to be moved to said each subscriber station if data is scheduled to said subscriber station;

determining a total priority value, said total priority value is the sum of said quality of service priority adjusted according to said fairness factor and said throughput value conversely adjusted according to said fairness factor; and

scheduling data on a portion of said shared channel to at least one subscriber station of said plurality of subscriber stations, beginning with the subscriber station with the highest total priority value.

2. (Original) The method of claim 1, where said quality of service priority value is determined by comparing said negotiated service share to said measured service share, where said quality of

service priority is higher when said negotiated service share is greater than said measured share and said quality of service priority value is low when said measured share is greater than said negotiated service share.

3. (Original) The method of claim 1, where said throughput value is calculated by determining the largest block format receivable at said each subscriber station in said plurality of subscriber stations.

4. (Original) The method of claim 3, where said determining the largest block format receivable at said each subscriber station occurs by determining the signal to noise ratio received at said each subscriber station of said plurality of subscriber stations.

5. (Original) The method of claim 4, where said portion of said shared channel scheduled to said at least one subscriber station of said plurality of subscriber stations is proportional to said total priority value for said at least one subscriber station.

6. (Original) The method of claim 5, where said method occurs at least once per frame on said shared channel.

7. (Original) A system for transmitting data, comprising:

a plurality of subscriber stations, each having a processor, a modem, a radio and an antenna, each subscriber station operable to receive data traffic from a base station; and

a base station having a processor, a modem, a radio and an antenna, and operable to receive said requests for a dedicated data channel from said subscriber stations and to schedule data for transmission to said plurality of subscriber stations over a shared channel in accordance with a scheduling policy that varies priorities between scheduling for fairness between subscriber stations and for improved throughput to said plurality of subscriber stations.

8. (Original) The system of claim 7, where each subscriber station of said plurality of subscriber stations is operable to negotiate with said at least one base station a negotiated service share of said shared channel for data traffic bound to said each subscriber station.

9. (Original) The system of claim 8, where said base station determines a quality of service priority value for each subscriber station in said plurality of subscriber stations by comparing a negotiated service share for said each subscriber station to a measured service share for said each subscriber station.

10. (Original) The system of claim 9, where said base station determines a throughput value for said each subscriber station in said plurality of subscriber stations by determining the largest block format receivable at said each subscriber station in said plurality of subscriber stations.

11. (Original) The system of claim 10, where said base station determines the largest block format receivable at said each subscriber station occurs by determining the signal to noise ratio received at said each subscriber station of said plurality of subscriber stations.

12. (Original) The system of claim 11, where said each subscriber station of said plurality of subscriber stations transmits an indication of its signal to noise ratio to said base station.

13. (Currently Amended) A system for transmitting data, comprising:

a plurality of subscriber stations, each having a processor, a modem, a radio and an antenna, each subscriber station operable to receive data traffic from a base station; and

at least one base station, said at least one base station having a processor, a modem, a radio and an antenna,

wherein said at least one base station is ~~operable~~ configured to schedule data traffic to each of said plurality of subscriber stations over a shared channel ~~in accordance with the method described in claim 1~~ by:

determining a fairness factor from a range of possible fairness factors, where a first end of said range indicates a policy of scheduling data with maximum fairness between said plurality of subscriber stations and a second end of said range indicates a policy of scheduling data for maximum data traffic over said shared channel; and

for each subscriber station in said plurality of subscriber stations that said base station has data to be delivered to

determining a quality of service priority value, said quality of service priority value indicating a priority of said subscriber station relative to other subscriber stations in said plurality of subscriber stations;

determining a throughput value, said throughput value indicating the quantity of data to be moved to said each subscriber station if data is scheduled to said subscriber station;

determining a total priority value, said total priority value is the sum of said quality of service priority adjusted according to said fairness factor and said throughput value conversely adjusted according to said fairness factor; and

scheduling data on a portion of said shared channel to at least one subscriber station of said plurality of subscriber stations, beginning with the subscriber station with the highest total priority value.

14. (Original) The system of claim 13, where each subscriber station of said plurality of subscriber stations is operable to negotiate with said at least one base station a negotiated service share of said shared channel for data traffic bound to said each subscriber station.

15. (Original) The system of claim 14, where said base station determines a quality of service priority value for each subscriber station in said plurality of subscriber stations by comparing a negotiated service share for said each subscriber station to a measured service share for said each

subscriber station.

16. (Original) The system of claim 15, where said base station determines a throughput value for said each subscriber station in said plurality of subscriber stations by determining the largest block format receivable at said each subscriber station in said plurality of subscriber stations.

17. (Original) The system of claim 16, where said base station determines the largest block format receivable at said each subscriber station occurs by determining the signal to noise ratio received at said each subscriber station of said plurality of subscriber stations.

18. (Original) The system of claim 17, where said each subscriber station of said plurality of subscriber stations transmits an indication of its signal to noise ration to said base station.

19. (Original) The system of claim 18, where said base station schedules data traffic to each of said plurality of subscriber stations over a shared channel in accordance with the method described in claim 1 whenever the total amount of data traffic reaches at least a predetermined threshold and schedules data traffic to each of said plurality of subscriber stations in accordance with another method whenever the total amount of data traffic is below said predetermined threshold.

20. (Currently Amended) A base station having a microprocessor, a modem, a radio and an antenna, and ~~operable~~ configured to schedule data traffic to a plurality of subscriber stations over a shared channel ~~in accordance with the method described in claim 1~~ by:

determining a fairness factor from a range of possible fairness factors, where a first end of said range indicates a policy of scheduling data with maximum fairness between said plurality of subscriber stations and a second end of said range indicates a policy of scheduling data for maximum data traffic over said shared channel; and

for each subscriber station in said plurality of subscriber stations that said base station has data to be delivered to

determining a quality of service priority value, said quality of service priority value indicating a priority of said subscriber station relative to other subscriber stations in said plurality of subscriber stations;

determining a throughput value, said throughput value indicating the quantity of data to be moved to said each subscriber station if data is scheduled to said subscriber station;

determining a total priority value, said total priority value is the sum of said quality of service priority adjusted according to said fairness factor and said throughput value conversely adjusted according to said fairness factor; and

scheduling data on a portion of said shared channel to at least one subscriber station of said plurality of subscriber stations, beginning with the subscriber station with the highest total priority value.

21. (Original) The base station of claim 20, where said base station determines a quality of service priority value for each subscriber station in said plurality of subscriber stations by comparing a negotiated service share for said each subscriber station to a measured service share for each subscriber station.

22. (Original) The base station of claim 21, where said base station determines a throughput value for said each subscriber station in said plurality of subscriber stations by determining the largest block format receivable at said each subscriber station in said plurality of subscriber stations.

23. (Original) The base station of claim 22, where said base station determines the largest block format receivable at said each subscriber station occurs by determining the signal to noise ratio received at said each subscriber station of said plurality of subscriber stations.

24. (Original) The base station of claim 23, where said each subscriber station of said plurality

of subscriber stations transmits an indication of its signal to noise ratio to said base station.

25. (Original) The base station of claim 24, where said base station schedules data traffic to each of said plurality of subscriber stations over a shared channel in accordance with the method described in claim 1 whenever the total amount of data traffic reaches at least a predetermined threshold and schedules data traffic to each of said plurality of subscriber stations in accordance with another method whenever the total amount of data traffic is below said predetermined threshold.